

Deloitte Resource Evaluation & Advisory
Canadian Domestic Forecast
Base Case Forecast Effective December 31 2015

		Price Inflation Rate	Cost Inflation Rate	CAD to USD Exchange Rate	Crude Oil Pricing						Natural Gas Liquids Pricing Edmonton Par Prices				Natural Gas Pricing					Sulphur		
					WTI at Cushing Oklahoma US\$/bbl	WTI at Cushing Oklahoma US\$/bbl	Edmonton City Gate C\$/bbl	Edmonton City Gate C\$/bbl	WCS 20.5 Deg. API Hardisty C\$/bbl	Bow River 25 Deg. API Hardisty C\$/bbl	Heavy Oil 12 Deg. API Hardisty C\$/bbl	Ethane C\$/bbl	Propane C\$/bbl	Butane C\$/bbl	Pentanes + Condensate C\$/bbl	Alberta Reference Average Price C\$/mcf	Alberta AECO Average Price C\$/mcf	Alberta AECO Average Price C\$/mcf	B.C. Direct Stn. 2 Sales C\$/mcf	NYMEX Henry Hub US\$/Mcf	NYMEX Henry Hub US\$/Mcf	Alberta Plant Gate C\$/lt
					Real	Current	Real	Current	Current	Current	Current	Current	Current	Current	Current	Current	Real	Current	Current	Current	Real	Current
H	2005	2.2%	2.2%	0.826	\$67.93	\$56.56	\$83.21	\$69.29	\$44.60	\$45.62	\$33.70	\$23.78	\$43.19	\$51.88	\$74.72	\$8.30	\$10.53	\$8.76	\$8.22	\$10.58	\$8.81	\$40.99
i	2006	2.0%	2.0%	0.882	\$77.51	\$66.02	\$86.04	\$73.28	\$51.22	\$51.90	\$39.53	\$19.83	\$44.07	\$58.16	\$78.18	\$6.56	\$7.68	\$6.54	\$6.58	\$7.92	\$6.75	\$19.53
s	2007	2.1%	2.1%	0.935	\$83.19	\$72.32	\$88.64	\$77.05	\$52.90	\$53.87	\$39.76	\$18.42	\$49.75	\$59.35	\$81.64	\$6.20	\$7.42	\$6.45	\$6.40	\$8.03	\$6.98	\$38.02
t	2008	2.4%	2.4%	0.943	\$112.10	\$99.57	\$115.73	\$102.80	\$82.95	\$83.90	\$73.08	\$22.59	\$56.96	\$83.54	\$109.82	\$7.88	\$9.18	\$8.16	\$8.20	\$9.98	\$8.86	\$303.83
o	2009	0.3%	0.3%	0.880	\$67.76	\$61.65	\$72.64	\$66.10	\$58.66	\$59.80	\$54.40	\$11.61	\$34.62	\$56.21	\$69.52	\$3.85	\$4.35	\$3.96	\$4.17	\$4.34	\$3.95	(\$5.08)
r	2010	1.8%	1.8%	0.971	\$86.99	\$79.40	\$85.25	\$77.80	\$67.22	\$68.18	\$60.62	\$11.53	\$45.19	\$68.79	\$84.06	\$3.76	\$4.39	\$4.01	\$4.01	\$4.81	\$4.39	\$56.94
i	2011	2.9%	2.9%	1.012	\$102.13	\$94.88	\$102.84	\$95.54	\$77.12	\$78.42	\$69.60	\$10.30	\$52.41	\$86.98	\$105.29	\$3.46	\$3.91	\$3.63	\$3.34	\$4.31	\$4.00	\$101.60
c	2012	1.5%	1.5%	1.001	\$98.34	\$94.11	\$90.47	\$86.57	\$73.10	\$74.41	\$64.07	\$6.73	\$30.80	\$75.47	\$99.71	\$2.25	\$2.50	\$2.39	\$2.29	\$2.88	\$2.75	\$126.81
a	2013	0.9%	0.9%	0.972	\$100.76	\$97.91	\$96.08	\$93.36	\$74.97	\$76.29	\$65.49	\$8.68	\$38.54	\$77.44	\$103.57	\$2.98	\$3.27	\$3.17	\$3.11	\$3.84	\$3.73	\$62.17
l	2014	1.9%	1.9%	0.906	\$95.07	\$93.26	\$95.82	\$94.00	\$81.06	\$81.49	\$73.70	\$12.46	\$38.38	\$57.08	\$100.95	\$4.22	\$4.59	\$4.50	\$4.16	\$4.48	\$4.39	\$88.99
2	12 Mths H	1.2%	1.2%	0.783	\$48.68	\$48.68	\$57.09	\$57.09	\$44.97	\$45.46	\$40.44	\$7.50	\$1.62	\$24.69	\$53.62	\$2.52	\$2.69	\$2.69	\$1.81	\$2.63	\$2.63	\$103.86
0	0 Mths F	0.0%	0.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1																						
5	Avg.	N/A	N/A	0.783	\$48.68	\$48.68	\$57.09	\$57.09	\$44.97	\$45.46	\$40.44	\$7.50	\$1.62	\$24.69	\$53.62	\$2.52	\$2.69	\$2.69	\$1.81	\$2.63	\$2.63	\$103.86
F	2016	0.0%	0.0%	0.740	\$42.00	\$42.00	\$51.35	\$51.35	\$37.35	\$38.35	\$31.35	\$6.75	\$5.15	\$20.55	\$51.35	\$2.25	\$2.45	\$2.45	\$1.70	\$2.40	\$2.40	\$100.00
o	2017	2.0%	2.0%	0.770	\$47.50	\$48.45	\$56.50	\$57.65	\$43.35	\$44.35	\$37.25	\$7.85	\$11.55	\$28.80	\$57.65	\$2.65	\$2.80	\$2.85	\$2.35	\$2.75	\$2.80	\$102.00
r	2018	2.0%	2.0%	0.800	\$55.00	\$57.20	\$63.75	\$66.35	\$51.75	\$52.80	\$45.50	\$8.60	\$19.90	\$39.80	\$66.35	\$2.90	\$3.00	\$3.10	\$2.60	\$3.00	\$3.10	\$104.05
e	2019	2.0%	2.0%	0.800	\$62.50	\$66.35	\$73.15	\$77.65	\$62.75	\$63.85	\$56.40	\$9.50	\$23.30	\$46.60	\$77.65	\$3.25	\$3.25	\$3.45	\$2.90	\$3.20	\$3.40	\$106.10
c	2020	2.0%	2.0%	0.800	\$70.00	\$75.75	\$82.50	\$89.30	\$74.15	\$75.25	\$67.65	\$10.30	\$26.80	\$53.60	\$89.30	\$3.50	\$3.45	\$3.75	\$3.20	\$3.35	\$3.65	\$108.25
a	2021	2.0%	2.0%	0.800	\$75.00	\$82.80	\$88.75	\$98.00	\$82.55	\$83.65	\$75.90	\$11.35	\$29.40	\$58.80	\$98.00	\$3.90	\$3.75	\$4.15	\$3.60	\$3.60	\$3.95	\$110.40
s	2022	2.0%	2.0%	0.800	\$80.00	\$90.10	\$95.00	\$107.00	\$91.20	\$92.35	\$84.45	\$12.10	\$32.10	\$64.20	\$107.00	\$4.15	\$3.90	\$4.40	\$3.85	\$3.70	\$4.15	\$112.60
t	2023	2.0%	2.0%	0.800	\$80.00	\$91.90	\$95.00	\$109.15	\$93.05	\$94.20	\$86.15	\$12.80	\$32.75	\$65.50	\$109.15	\$4.40	\$4.05	\$4.65	\$4.10	\$3.85	\$4.40	\$114.85
	2024	2.0%	2.0%	0.800	\$80.00	\$93.75	\$95.00	\$111.30	\$94.90	\$96.10	\$87.85	\$13.70	\$33.40	\$66.80	\$111.30	\$4.75	\$4.25	\$5.00	\$4.40	\$4.00	\$4.70	\$117.15
	2025	2.0%	2.0%	0.800	\$80.00	\$95.60	\$95.00	\$113.55	\$96.80	\$98.00	\$89.65	\$14.15	\$34.05	\$68.10	\$113.55	\$4.90	\$4.30	\$5.15	\$4.55	\$4.05	\$4.85	\$119.50
	2026	2.0%	2.0%	0.800	\$80.00	\$97.50	\$95.00	\$115.80	\$98.75	\$99.95	\$91.40	\$15.10	\$34.75	\$69.50	\$115.80	\$5.25	\$4.50	\$5.50	\$4.90	\$4.20	\$5.10	\$121.90
	2027	2.0%	2.0%	0.800	\$80.00	\$99.45	\$95.00	\$118.10	\$100.70	\$101.95	\$93.25	\$15.90	\$35.45	\$70.85	\$118.10	\$5.55	\$4.65	\$5.80	\$5.15	\$4.30	\$5.35	\$124.35
	2028	2.0%	2.0%	0.800	\$80.00	\$101.45	\$95.00	\$120.50	\$102.75	\$104.00	\$95.10	\$16.25	\$36.15	\$72.30	\$120.50	\$5.65	\$4.65	\$5.90	\$5.25	\$4.30	\$5.45	\$126.80
	2029	2.0%	2.0%	0.800	\$80.00	\$103.50	\$95.00	\$122.90	\$104.80	\$106.10	\$97.00	\$16.55	\$36.85	\$73.75	\$122.90	\$5.75	\$4.65	\$6.00	\$5.35	\$4.30	\$5.55	\$129.35
	2030	2.0%	2.0%	0.800	\$80.00	\$105.55	\$95.00	\$125.35	\$106.90	\$108.20	\$98.95	\$16.90	\$37.60	\$75.20	\$125.35	\$5.85	\$4.65	\$6.15	\$5.50	\$4.30	\$5.65	\$131.95
	2031	2.0%	2.0%	0.800	\$80.00	\$107.65	\$95.00	\$127.85	\$109.00	\$110.35	\$100.95	\$17.25	\$38.35	\$76.70	\$127.85	\$6.00	\$4.65	\$6.25	\$5.60	\$4.30	\$5.80	\$134.60
	2032	2.0%	2.0%	0.800	\$80.00	\$109.80	\$95.00	\$130.40	\$111.20	\$112.55	\$102.95	\$17.55	\$39.10	\$78.25	\$130.40	\$6.10	\$4.65	\$6.40	\$5.70	\$4.30	\$5.90	\$137.30
	2033	2.0%	2.0%	0.800	\$80.00	\$112.00	\$95.00	\$133.00	\$113.40	\$114.80	\$105.00	\$17.90	\$39.90	\$79.80	\$133.00	\$6.25	\$4.65	\$6.50	\$5.80	\$4.30	\$6.00	\$140.00
	2034	2.0%	2.0%	0.800	\$80.00	\$114.25	\$95.00	\$135.70	\$115.70	\$117.10	\$107.10	\$18.30	\$40.70	\$81.40	\$135.70	\$6.35	\$4.65	\$6.65	\$5.95	\$4.30	\$6.15	\$142.80
	2035	2.0%	2.0%	0.800	\$80.00	\$116.55	\$95.00	\$138.40	\$118.00	\$119.45	\$109.25	\$18.65	\$41.50	\$83.05	\$138.40	\$6.50	\$4.65	\$6.75	\$6.05	\$4.30	\$6.25	\$145.70
	2035+	2.0%	2.0%	0.800	0.0%	2.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	2.0%	2.0%	2.0%

- Notes:
- All prices are in Canadian dollars except WTI and NYMEX gas which are in U.S. dollars
 - Edmonton city gate prices based on historical light oil par prices posted by the government of Alberta and Net Energy differential futures (40 Deg. API < 0.5% Sulphur)
 - Natural Gas Liquid prices are forecasted at Edmonton therefore an additional transportation cost must be included to plant gate sales point
 - 1 Mcf is equivalent to 1 mmbtu
 - Real prices listed in 2015 dollars with no escalation considered
 - Alberta gas prices, except AECO, include an average cost of service to the plant gate



Disclaimer - No representation or warranty of any kind (whether expressed or implied) is given by Deloitte LLP as to the accuracy, completeness, currency or fitness for any purpose of this document. As such, this document does not constitute the giving of investment advice, nor a part of any advice on investment decisions. Accordingly, regardless of the form of action, whether in contract, tort or otherwise, and to the extent permitted by applicable law, Deloitte LLP accepts no liability of any kind and disclaims all responsibility for the consequences of any person acting or refraining from acting in reliance on this price forecast in whole or in part. **This price forecast is not for dissemination in the United States or for distribution to United States wire services.**

Deloitte Resource Evaluation & Advisory
Canadian Domestic Forecast - Additional Crude Reference Prices
Base Case Forecast Effective December 31 2015

						Crude Oil Pricing											Natural Gas
		Price Inflation Rate	Cost Inflation Rate	CAD to USD Exchange Rate	WTI at Cushing Oklahoma US\$/bbl Real	WTI at Cushing Oklahoma US\$/bbl Current	Edmonton City Gate C\$/bbl Real	Edmonton City Gate C\$/bbl Current	Lt. Sour 35 Deg. API Cromer, SK C\$/bbl Current	MSO 31 Deg. API Hardisty C\$/bbl Current	Bow River 25 Deg. API Hardisty C\$/bbl Current	WCS 20.5 Deg. API Hardisty C\$/bbl Current	Heavy Oil 12 Deg. API Hardisty C\$/bbl Current	Synbit (AWB) 70% Bitumen 30% Cond. 21 Deg. API C\$/bbl Current	Delivered to Sarnia MSW C\$/bbl Current	Ontario Dawn Reference Point C\$/mcf Current	
H	2005	2.2%	2.2%	0.826	\$67.93	\$56.56	\$83.21	\$69.29	\$62.31	\$56.26	\$45.62	\$44.60	\$33.70	\$46.01	\$71.30	\$10.67	
i	2006	2.0%	2.0%	0.882	\$77.51	\$66.02	\$86.04	\$73.28	\$66.08	\$61.45	\$51.90	\$51.22	\$39.53	\$51.12	\$75.37	\$7.76	
s	2007	2.1%	2.1%	0.935	\$83.19	\$72.32	\$88.64	\$77.05	\$70.06	\$64.87	\$53.87	\$52.90	\$39.76	\$52.33	\$78.48	\$7.43	
t	2008	2.4%	2.4%	0.943	\$112.10	\$99.57	\$115.73	\$102.80	\$95.28	\$92.40	\$83.90	\$82.95	\$73.08	\$84.10	\$109.21	\$9.88	
o	2009	0.3%	0.3%	0.880	\$67.76	\$61.65	\$72.64	\$66.10	\$64.04	\$63.76	\$59.80	\$58.66	\$54.40	\$58.94	\$69.29	\$4.80	
r	2010	1.8%	1.8%	0.971	\$86.99	\$79.40	\$85.25	\$77.80	\$76.40	\$72.32	\$68.18	\$67.22	\$60.62	\$67.65	\$81.48	\$4.79	
i	2011	2.9%	2.9%	1.012	\$102.13	\$94.88	\$102.84	\$95.54	\$92.13	\$83.39	\$78.42	\$77.12	\$69.60	\$80.30	\$99.26	\$4.34	
c	2012	1.5%	1.5%	1.001	\$98.34	\$94.11	\$90.47	\$86.57	\$84.27	\$77.53	\$74.41	\$73.10	\$64.07	\$74.76	\$90.36	\$3.11	
a	2013	0.9%	0.9%	0.972	\$100.76	\$97.91	\$96.08	\$93.36	\$91.76	\$82.65	\$76.29	\$74.97	\$65.49	\$76.91	\$97.33	\$4.13	
l	2014	1.9%	1.9%	0.906	\$95.07	\$93.26	\$95.82	\$94.00	\$92.91	\$89.39	\$81.49	\$81.06	\$73.70	\$81.87	\$98.19	\$5.76	
2	12 Mths H	1.2%	1.2%	0.783	\$48.68	\$48.68	\$57.09	\$57.09	\$55.38	\$54.54	\$45.46	\$44.97	\$40.44	\$44.39	\$63.67	\$3.72	
0	0 Mths F	0.0%	0.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	5 Avg.	N/A	N/A	0.783	\$48.68	\$48.68	\$57.09	\$57.09	\$55.38	\$54.54	\$45.46	\$44.97	\$40.44	\$44.39	\$63.67	\$3.72	
F	2016	0.0%	0.0%	0.740	\$42.00	\$42.00	\$51.35	\$51.35	\$48.85	\$45.35	\$38.35	\$37.35	\$31.35	\$37.35	\$56.35	\$3.55	
o	2017	2.0%	2.0%	0.770	\$47.50	\$48.45	\$56.50	\$57.65	\$55.10	\$51.50	\$44.35	\$43.35	\$37.25	\$43.35	\$62.75	\$4.00	
r	2018	2.0%	2.0%	0.800	\$55.00	\$57.20	\$63.75	\$66.35	\$63.70	\$60.10	\$52.80	\$51.75	\$45.50	\$51.75	\$71.55	\$4.25	
e	2019	2.0%	2.0%	0.800	\$62.50	\$66.35	\$73.15	\$77.65	\$74.95	\$71.25	\$63.85	\$62.75	\$56.40	\$62.75	\$82.95	\$4.60	
c	2020	2.0%	2.0%	0.800	\$70.00	\$75.75	\$82.50	\$89.30	\$86.60	\$82.80	\$75.25	\$74.15	\$67.65	\$74.15	\$94.70	\$4.95	
a	2021	2.0%	2.0%	0.800	\$75.00	\$82.80	\$88.75	\$98.00	\$95.25	\$91.35	\$83.65	\$82.55	\$75.90	\$82.55	\$103.50	\$5.35	
s	2022	2.0%	2.0%	0.800	\$80.00	\$90.10	\$95.00	\$107.00	\$104.15	\$100.25	\$92.35	\$91.20	\$84.45	\$91.20	\$112.60	\$5.65	
t	2023	2.0%	2.0%	0.800	\$80.00	\$91.90	\$95.00	\$109.15	\$106.25	\$102.25	\$94.20	\$93.05	\$86.15	\$93.05	\$114.85	\$5.90	
	2024	2.0%	2.0%	0.800	\$80.00	\$93.75	\$95.00	\$111.30	\$108.40	\$104.30	\$96.10	\$94.90	\$87.85	\$94.90	\$117.15	\$6.25	
	2025	2.0%	2.0%	0.800	\$80.00	\$95.60	\$95.00	\$113.55	\$110.55	\$106.35	\$98.00	\$96.80	\$89.65	\$96.80	\$119.50	\$6.45	
	2026	2.0%	2.0%	0.800	\$80.00	\$97.50	\$95.00	\$115.80	\$112.75	\$108.50	\$99.95	\$98.75	\$91.40	\$98.75	\$121.90	\$6.85	
	2027	2.0%	2.0%	0.800	\$80.00	\$99.45	\$95.00	\$118.10	\$115.00	\$110.65	\$101.95	\$100.70	\$93.25	\$100.70	\$124.35	\$7.15	
	2028	2.0%	2.0%	0.800	\$80.00	\$101.45	\$95.00	\$120.50	\$117.30	\$112.85	\$104.00	\$102.75	\$95.10	\$102.75	\$126.80	\$7.30	
	2029	2.0%	2.0%	0.800	\$80.00	\$103.50	\$95.00	\$122.90	\$119.65	\$115.15	\$106.10	\$104.80	\$97.00	\$104.80	\$129.35	\$7.45	
	2030	2.0%	2.0%	0.800	\$80.00	\$105.55	\$95.00	\$125.35	\$122.05	\$117.45	\$108.20	\$106.90	\$98.95	\$106.90	\$131.95	\$7.60	
	2031	2.0%	2.0%	0.800	\$80.00	\$107.65	\$95.00	\$127.85	\$124.50	\$119.80	\$110.35	\$109.00	\$100.95	\$109.00	\$134.60	\$7.75	
	2032	2.0%	2.0%	0.800	\$80.00	\$109.80	\$95.00	\$130.40	\$127.00	\$122.20	\$112.55	\$111.20	\$102.95	\$111.20	\$137.30	\$7.90	
	2033	2.0%	2.0%	0.800	\$80.00	\$112.00	\$95.00	\$133.00	\$129.50	\$124.60	\$114.80	\$113.40	\$105.00	\$113.40	\$140.00	\$8.05	
	2034	2.0%	2.0%	0.800	\$80.00	\$114.25	\$95.00	\$135.70	\$132.10	\$127.10	\$117.10	\$115.70	\$107.10	\$115.70	\$142.80	\$8.20	
	2035	2.0%	2.0%	0.800	\$80.00	\$116.55	\$95.00	\$138.40	\$134.75	\$129.65	\$119.45	\$118.00	\$109.25	\$118.00	\$145.70	\$8.40	
	2035+	2.0%	2.0%	0.800	0.0%	2.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	

- Notes:
- All prices are in Canadian dollars except WTI and NYMEX gas which are in U.S. dollars
 - Edmonton city gate prices based on historical light oil par prices posted by the government of Alberta and Net Energy differential futures (40 Deg. API < 0.5% Sulphur)
 - 1 Mcf is equivalent to 1 mmbtu
 - Real prices listed in 2015 dollars with no escalation considered
 - Sarnia price is Edmonton Sweet (MSW) delivered to Sarnia, Ontario
 - Synbit is a combined bitumin (70%) and Condensate (30%) stream equivalent to the Acces Western Blend (AWB).



Disclaimer - No representation or warranty of any kind (whether expressed or implied) is given by Deloitte LLP as to the accuracy, completeness, currency or fitness for any purpose of this document. As such, this document does not constitute the giving of investment advice, nor a part of any advice on investment decisions. Accordingly, regardless of the form of action, whether in contract, tort or otherwise, and to the extent permitted by applicable law, Deloitte LLP accepts no liability of any kind and disclaims all responsibility for the consequences of any person acting or refraining from acting in reliance on this price forecast in whole or in part. **This price forecast is not for dissemination in the United States or for distribution to United States wire services.**

Deloitte Resource Evaluation & Advisory
International Forecast
Base Case Forecast Effective December 31 2015
Real Prices

		Crude Oil Pricing															
		Average WTI Spot	Alaskan North Slope	California Kern River	Louisiana Heavy Sweet	Louisiana Light Sweet	MARS Blend	Wyoming Sweet	Brent Spot	Gulf Coast Argus Sour Crude Index	Average OPEC Basket	Venezuelan Merely	Nigerian Bonny Light	Arabia UAE Dubai Feteh	Mexico Maya	Russia Urals	Indonesia Minas
		US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl
		Real	Real	Real	Real	Real	Real	Real	Real	Real	Real	Real	Real	Real	Real	Real	Real
F	2016	\$42.00	\$38.00	\$39.00	\$42.00	\$43.00	\$41.00	\$33.50	\$44.00	\$41.00	\$41.00	\$33.00	\$44.50	\$42.00	\$36.00	\$43.25	\$41.00
o	2017	\$47.50	\$43.50	\$44.50	\$47.50	\$48.50	\$46.50	\$39.00	\$49.50	\$46.50	\$46.50	\$38.50	\$50.00	\$47.50	\$41.50	\$48.75	\$46.50
r	2018	\$55.00	\$51.00	\$52.00	\$55.00	\$56.00	\$54.00	\$46.50	\$57.00	\$54.00	\$54.00	\$46.00	\$57.50	\$55.00	\$49.00	\$56.25	\$54.00
e	2019	\$62.50	\$58.50	\$59.50	\$62.50	\$63.50	\$61.50	\$54.00	\$64.50	\$61.50	\$61.50	\$53.50	\$65.00	\$62.50	\$56.50	\$63.75	\$61.50
c	2020	\$70.00	\$66.00	\$67.00	\$70.00	\$71.00	\$69.00	\$61.50	\$72.00	\$69.00	\$69.00	\$61.00	\$72.50	\$70.00	\$64.00	\$71.25	\$69.00
a	2021	\$75.00	\$71.00	\$72.00	\$75.00	\$76.00	\$74.00	\$66.50	\$77.00	\$74.00	\$74.00	\$66.00	\$77.50	\$75.00	\$69.00	\$76.25	\$74.00
s	2022	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
t	2023	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2024	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2025	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2026	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2027	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2028	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2029	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2030	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2031	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2032	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2033	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2034	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2035	\$80.00	\$76.00	\$77.00	\$80.00	\$81.00	\$79.00	\$71.50	\$82.00	\$79.00	\$79.00	\$71.00	\$82.50	\$80.00	\$74.00	\$81.25	\$79.00
	2035+	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

		Natural Gas Pricing										Ethanol
		USD to GBP Exchange Rate	USD to EUR Exchange Rate	NYMEX Henry Hub	Permian Waha	San Juan Ignacio	Gulf Coast (onshore)	Louisiana East Texas	Rocky Mtn. Opal	UK NBP	India Domestic Gas	U.S. CBOT Ethanol
		Rate	Rate	US\$/Mcf Real	US\$/Mcf Real	US\$/Mcf Real	US\$/Mcf Real	US\$/Mcf Real	US\$/Mcf Real	US\$/Mcf Real	US\$/Mcf Real	US\$/gal. Real
F	2016	1.550	1.100	\$2.40	\$2.20	\$2.20	\$2.30	\$2.35	\$2.25	\$5.40	\$3.25	\$1.50
o	2017	1.550	1.100	\$2.75	\$2.55	\$2.55	\$2.65	\$2.70	\$2.60	\$5.75	\$2.40	\$1.50
r	2018	1.550	1.100	\$3.00	\$2.80	\$2.80	\$2.90	\$2.95	\$2.85	\$6.00	\$2.75	\$1.50
e	2019	1.550	1.100	\$3.20	\$3.00	\$3.00	\$3.10	\$3.15	\$3.05	\$6.20	\$3.00	\$1.50
c	2020	1.550	1.100	\$3.35	\$3.15	\$3.15	\$3.25	\$3.30	\$3.20	\$6.35	\$3.20	\$1.50
a	2021	1.550	1.100	\$3.60	\$3.40	\$3.40	\$3.50	\$3.55	\$3.45	\$6.60	\$3.35	\$1.50
s	2022	1.550	1.100	\$3.70	\$3.50	\$3.50	\$3.60	\$3.65	\$3.55	\$6.70	\$3.60	\$1.50
t	2023	1.550	1.100	\$3.85	\$3.65	\$3.65	\$3.75	\$3.80	\$3.70	\$6.85	\$3.70	\$1.50
	2024	1.550	1.100	\$4.00	\$3.80	\$3.80	\$3.90	\$3.95	\$3.85	\$7.00	\$3.85	\$1.50
	2025	1.550	1.100	\$4.05	\$3.85	\$3.85	\$3.95	\$4.00	\$3.90	\$7.05	\$4.00	\$1.50
	2026	1.550	1.100	\$4.20	\$4.00	\$4.00	\$4.10	\$4.15	\$4.05	\$7.20	\$4.05	\$1.50
	2027	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.20	\$1.50
	2028	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2029	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2030	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2031	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2032	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2033	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2034	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2035	1.550	1.100	\$4.30	\$4.10	\$4.10	\$4.20	\$4.25	\$4.15	\$7.30	\$4.30	\$1.50
	2035+	1.550	1.100	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Notes: Venezuelan Merely replaced BCF-17 in the OPEC basket March 1, 2009.



Disclaimer - No representation or warranty of any kind (whether expressed or implied) is given by Deloitte LLP as to the accuracy, completeness, currency or fitness for any purpose of this document. As such, this document does not constitute the giving of investment advice, nor a part of any advice on investment decisions. Accordingly, regardless of the form of action, whether in contract, tort or otherwise, and to the extent permitted by applicable law, Deloitte LLP accepts no liability of any kind and disclaims all responsibility for the consequences of any person acting or refraining from acting in reliance on this price forecast in whole or in part. **This price forecast is not for dissemination in the United States or for distribution to United States wire services.**

Deloitte Resource Evaluation & Advisory
International Forecast
Base Case Forecast Effective December 31 2015
Escalated Prices

		Crude Oil Pricing																	Natural Gas								Ethanol U.S. CBOT Ethanol US\$/gal.	
		USD to GBP Exchange Rate	USD to EUR Exchange Rate	Average	Alaska	California	Louisiana	Louisiana	MARS	Wyoming	Brent Spot US\$/bbl	Gulf Coast	Average	Venezuelan	Nigerian	Arabia UAE	Mexico	Russia	Indonesia	NYMEX								
				WTI Spot US\$/bbl	North Slope US\$/bbl	Kern River US\$/bbl	Heavy Sweet US\$/bbl	Light Sweet US\$/bbl	Sweet Blend US\$/bbl	Sweet US\$/bbl		Sour US\$/bbl	OPEC Basket US\$/bbl	Mery US\$/bbl	Bonny Light US\$/bbl	Dubai Feth US\$/bbl	Maya US\$/bbl	Urals US\$/bbl	Minas US\$/bbl	Henry Hub US\$/Mcf	Permian Waha US\$/Mcf	San Juan Ignacio US\$/Mcf	Gulf Coast (Onshore) US\$/Mcf	Louisiana East Texas US\$/Mcf	Rocky Mtn. Opal US\$/Mcf	UK NBP US\$/Mcf		
H 2006	1.843	1.256	\$66.02	\$56.97	\$55.00	\$63.31	\$63.64	\$57.15	\$60.41	N/A	\$61.04	N/A	\$66.81	\$61.51	\$51.20	\$61.34	\$65.20	\$6.75	\$5.90	\$5.81	\$6.36	\$6.72	\$5.35	\$4.96	N/A			
i 2007	2.002	1.371	\$72.32	\$63.80	\$62.49	\$70.20	\$72.34	\$63.80	\$64.36	\$72.47	N/A	\$69.07	N/A	\$75.15	\$68.40	\$59.85	\$69.54	\$73.55	\$6.98	\$6.24	\$6.13	\$6.56	\$6.99	\$4.01	\$2.93	N/A		
s 2008	1.852	1.470	\$99.57	\$91.24	\$87.20	\$103.62	\$100.82	\$94.61	\$88.38	\$96.85	N/A	\$94.05	N/A	\$100.24	\$93.48	\$83.83	\$94.51	\$100.25	\$8.86	\$7.44	\$7.20	\$8.48	\$8.89	\$6.52	\$6.14	N/A		
t 2009	1.595	1.393	\$61.65	\$54.84	\$52.09	\$58.78	\$60.29	\$56.51	\$51.73	\$61.49	N/A	\$60.86	N/A	\$53.01	\$61.65	\$56.41	\$60.70	\$58.84	\$3.95	\$3.43	\$3.34	\$3.76	\$3.96	\$3.14	\$4.53	\$1.72		
o 2010	1.546	1.328	\$73.40	\$72.17	\$72.83	\$78.16	\$79.32	\$75.60	\$70.44	\$79.68	\$75.60	\$77.98	\$69.68	\$70.70	\$78.04	\$70.07	\$78.01	N/A	\$4.39	\$4.16	\$4.09	\$4.29	\$4.38	\$3.94	\$6.41	\$1.80		
r 2011	1.604	1.392	\$94.88	\$98.47	\$103.11	\$107.12	\$108.03	\$105.37	\$87.41	\$111.26	\$105.37	\$107.45	\$97.88	\$88.28	\$106.19	\$98.95	\$109.19	N/A	\$4.00	\$3.88	\$3.82	\$3.90	\$3.98	\$3.80	\$9.03	\$2.51		
i 2012	1.586	1.286	\$94.11	\$98.35	\$103.69	\$107.18	\$107.19	\$104.82	\$85.04	\$111.99	\$104.82	\$109.50	\$100.11	\$111.61	\$109.11	\$99.74	\$110.50	\$110.64	\$2.75	\$2.64	\$2.64	\$2.68	\$2.74	\$2.67	\$9.47	\$2.31		
c 2013	1.565	1.329	\$97.91	\$95.85	\$101.38	\$105.80	\$106.19	\$101.80	\$89.97	\$108.64	\$101.80	\$105.51	\$96.71	\$111.41	\$105.51	\$98.06	\$108.05	\$107.54	\$3.73	\$3.62	\$3.64	\$3.64	\$3.68	\$3.64	\$10.66	\$2.04		
a 2014	1.647	1.329	\$93.26	\$86.45	\$90.38	\$96.16	\$94.25	\$92.95	\$83.50	\$99.02	\$92.95	\$96.19	\$86.79	\$100.77	\$96.61	\$85.81	\$98.01	\$98.63	\$4.39	\$4.28	\$4.28	\$4.31	\$4.04	\$4.34	\$8.24	\$1.93		
l 2015	1.529	1.110	\$48.68	\$42.52	\$45.29	\$48.78	\$49.26	\$47.55	\$40.88	\$52.42	\$47.55	\$49.93	\$41.97	\$53.60	\$51.66	\$44.79	\$52.54	\$49.94	\$2.63	\$2.44	\$2.45	\$2.54	\$2.60	\$2.45	\$6.53	\$1.50		
F 2016	1.550	1.100	\$42.00	\$38.00	\$39.00	\$42.00	\$43.00	\$41.00	\$33.50	\$44.00	\$41.00	\$33.00	\$44.50	\$42.00	\$36.00	\$43.25	\$41.00	\$2.40	\$2.20	\$2.20	\$2.30	\$2.35	\$2.25	\$5.40	\$1.50			
o 2017	1.550	1.100	\$48.45	\$44.35	\$45.40	\$48.45	\$49.45	\$47.45	\$39.80	\$50.50	\$47.45	\$47.45	\$39.25	\$51.00	\$48.45	\$42.35	\$49.75	\$47.45	\$2.80	\$2.60	\$2.60	\$2.70	\$2.75	\$2.65	\$5.85	\$1.55		
r 2018	1.550	1.100	\$57.20	\$53.05	\$54.10	\$57.20	\$58.25	\$56.20	\$48.40	\$59.30	\$56.20	\$56.20	\$47.85	\$59.80	\$57.20	\$51.00	\$58.50	\$56.20	\$3.10	\$2.90	\$2.90	\$3.00	\$3.05	\$2.95	\$6.25	\$1.55		
e 2019	1.550	1.100	\$66.35	\$62.10	\$63.15	\$66.35	\$67.40	\$65.25	\$57.30	\$68.45	\$65.25	\$65.25	\$56.75	\$69.00	\$66.35	\$59.95	\$67.65	\$65.25	\$3.40	\$3.20	\$3.20	\$3.30	\$3.35	\$3.25	\$6.60	\$1.60		
c 2020	1.550	1.100	\$75.75	\$71.45	\$72.50	\$75.75	\$76.85	\$74.70	\$66.55	\$77.95	\$74.70	\$74.70	\$66.05	\$78.50	\$75.75	\$69.30	\$77.10	\$74.70	\$3.65	\$3.40	\$3.40	\$3.50	\$3.55	\$3.45	\$6.85	\$1.60		
a 2021	1.550	1.100	\$82.80	\$78.40	\$79.50	\$82.80	\$83.90	\$81.70	\$73.40	\$85.00	\$81.70	\$81.70	\$72.85	\$85.55	\$82.80	\$76.20	\$84.20	\$81.70	\$3.95	\$3.75	\$3.75	\$3.85	\$3.90	\$3.80	\$7.30	\$1.65		
s 2022	1.550	1.100	\$90.10	\$85.60	\$86.70	\$90.10	\$91.20	\$88.95	\$80.50	\$92.35	\$88.95	\$88.95	\$79.95	\$92.90	\$90.10	\$83.35	\$91.50	\$88.95	\$4.15	\$3.95	\$3.95	\$4.05	\$4.10	\$4.00	\$7.55	\$1.70		
t 2023	1.550	1.100	\$91.90	\$87.30	\$88.45	\$91.90	\$93.05	\$90.75	\$82.15	\$94.20	\$90.75	\$90.75	\$81.55	\$94.75	\$91.90	\$86.00	\$93.35	\$90.75	\$4.40	\$4.20	\$4.20	\$4.30	\$4.35	\$4.25	\$7.85	\$1.70		
2024	1.550	1.100	\$93.75	\$89.05	\$90.20	\$93.75	\$94.90	\$92.55	\$83.75	\$96.10	\$92.55	\$92.55	\$83.20	\$96.65	\$93.75	\$86.70	\$95.20	\$92.55	\$4.70	\$4.45	\$4.45	\$4.55	\$4.65	\$4.50	\$8.20	\$1.75		
2025	1.550	1.100	\$95.60	\$90.85	\$92.00	\$95.60	\$96.80	\$94.40	\$85.45	\$98.00	\$94.40	\$94.40	\$84.85	\$98.60	\$95.60	\$88.45	\$97.10	\$94.40	\$4.85	\$4.60	\$4.60	\$4.70	\$4.80	\$4.65	\$8.45	\$1.80		
2026	1.550	1.100	\$97.50	\$92.65	\$93.85	\$97.50	\$98.75	\$96.30	\$87.15	\$99.95	\$96.30	\$96.30	\$86.55	\$100.55	\$97.50	\$90.20	\$99.05	\$96.30	\$5.10	\$4.90	\$4.90	\$5.00	\$5.05	\$4.95	\$8.80	\$1.85		
2027	1.550	1.100	\$99.45	\$94.50	\$95.75	\$99.45	\$100.70	\$98.25	\$88.90	\$101.95	\$98.25	\$98.25	\$88.30	\$102.60	\$99.45	\$92.00	\$101.00	\$98.25	\$5.35	\$5.10	\$5.10	\$5.20	\$5.30	\$5.15	\$9.10	\$1.85		
2028	1.550	1.100	\$101.45	\$96.40	\$97.65	\$101.45	\$102.75	\$100.20	\$90.70	\$104.00	\$100.20	\$100.20	\$90.05	\$104.65	\$101.45	\$93.85	\$103.05	\$100.20	\$5.45	\$5.20	\$5.20	\$5.35	\$5.40	\$5.25	\$9.25	\$1.90		
2029	1.550	1.100	\$103.50	\$98.30	\$99.60	\$103.50	\$104.80	\$102.20	\$92.50	\$106.10	\$102.20	\$102.20	\$91.85	\$106.70	\$103.50	\$95.75	\$105.10	\$102.20	\$5.55	\$5.30	\$5.30	\$5.45	\$5.50	\$5.35	\$9.45	\$1.95		
2030	1.550	1.100	\$105.55	\$100.30	\$101.60	\$105.55	\$106.90	\$104.25	\$94.35	\$108.20	\$104.25	\$104.25	\$93.70	\$108.85	\$105.55	\$97.65	\$107.20	\$104.25	\$5.65	\$5.40	\$5.40	\$5.55	\$5.60	\$5.45	\$9.65	\$2.00		
2031	1.550	1.100	\$107.65	\$102.30	\$103.65	\$107.65	\$109.00	\$106.30	\$96.25	\$110.35	\$106.30	\$106.30	\$95.55	\$111.05	\$107.65	\$99.60	\$109.35	\$106.30	\$5.80	\$5.50	\$5.50	\$5.65	\$5.70	\$5.60	\$9.80	\$2.00		
2032	1.550	1.100	\$109.80	\$104.35	\$105.70	\$109.80	\$111.20	\$108.45	\$98.15	\$112.55	\$108.45	\$108.45	\$97.45	\$113.25	\$109.80	\$101.60	\$111.55	\$108.45	\$5.90	\$5.65	\$5.65	\$5.75	\$5.85	\$5.70	\$10.00	\$2.05		
2033	1.550	1.100	\$112.00	\$106.40	\$107.80	\$112.00	\$113.40	\$110.60	\$100.10	\$114.80	\$110.60	\$110.60	\$99.40	\$115.50	\$112.00	\$103.60	\$113.75	\$110.60	\$6.00	\$5.75	\$5.75	\$5.90	\$5.95	\$5.80	\$10.20	\$2.10		
2034	1.550	1.100	\$114.25	\$108.55	\$109.95	\$114.25	\$115.70	\$112.85	\$102.10	\$117.10	\$112.85	\$112.85	\$101.40	\$117.85	\$114.25	\$105.70	\$116.05	\$112.85	\$6.15	\$5.85	\$5.85	\$6.00	\$6.05	\$5.95	\$10.45	\$2.15		
2035	1.550	1.100	\$116.55	\$110.70	\$112.15	\$116.55	\$118.00	\$115.10	\$104.15	\$119.45	\$115.10	\$115.10	\$103.45	\$120.20	\$116.55	\$107.80	\$118.35	\$115.10	\$6.25	\$5.95	\$5.95	\$6.10	\$6.20	\$6.05	\$10.65	\$2.20		
2035+	1.550	1.100	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	

Notes: Venezuelan Mery replaced BCF-17 in the OPEC basket March 1, 2009.



Disclaimer - No representation or warranty of any kind (whether expressed or implied) is given by Deloitte & Touche LLP as to the accuracy, completeness, currency or fitness for any purpose of this document. As such, this document does not constitute the giving of investment advice, nor a part of any advice on investment decisions. Accordingly, regardless of the form of action, whether in contract, tort or otherwise, and to the extent permitted by applicable law, Deloitte & Touche LLP accepts no liability of any kind and disclaims all responsibility for the consequences of any person acting or refraining from acting in reliance on this price forecast in whole or in part. This price forecast is not for dissemination in the United States or for distribution to United States wire services.